1990-1991 INDEX

AUTHOR INDEX, 1990-1991

A

Abkian, Varouj
L.A. Hyperion plant process 3[11],39
Alam, Abu
UNOX aerobic digester stress analysis 3[11],69
Amin, Habib
groundwater treatment feasibility study 3[8],74
Ammerman, David
water reuse in Fla. 3[11],18
Arniella, Elio
soil remediation 3[8],22
Arora, Madan
design guides for S. Calif. 3[7],22

B

Bachtle, Walter
SCADA alarm and metering applications 3[9],46
Bagwell, Steve
CWA reauthorization bill 3[8],18
Baier, Urs
sludge stabilization 3[1],56
Balacko, George
earthquake relief, Armenia 3[10],90
Balog, George
Cr-contaminated groundwater remediation 3[4],53
Barger, Rick
cogeneration saves money 3[8],6
Barham, Jim
cogeneration saves money 3[8],6
Bastian, Robert
land application vs. advanced treatment 3[8],40
Bellows, Peter
trenchless techniques (no-dig) review 3[4],48
Bennett, Drew
watershed drainage control 3[9],63
Bergen, Lawrence
Boston water tunneling 3[11],16
Bhadra, Amal
sulfation/oxidation in
wastewater degradation 3[12],55
Bhattarai, Rajendra
gravity sludge thickener performance 3[7],57
Binney, Peter
NPS research needs 3[6],60
Bissex, Donald
prioritized remediation with GIS software 3[12],20
Bizzell, William
sewer plan and profile sheet program 3[9],47
Blatnica, Leonard
computerized gas monitoring 3[5],36
Bond, Linda
Black & Veatch model community 3[3],28
Bowers, David
VerTech sludge treatment process 3[11],64
Brandenburg, Barton
landfill leachate acceptance criteria 3[8],69
Brey, Charles
SCADA alarm and metering applications 3[9],46
Brinker, Michael
sludge dewatering for incineration 3[3],63
Brosnan, Denis
VerTech sludge treatment process 3[11],64
Brosseau, Geoff
BMPs to control stormwater 3[10],26
Buddhavarapu, Lakshmi
wastewater treatment using duckweed 3[3],41
Buchholz, William
Cairo wastewater project 3[1],33
Byatt, Ian
water utility privatization in England 3[10],94

C

Campbell, Herbert
oil from sludge, Canada 3[7],64
Caspe, Hugh
Boston water tunneling 3[11],16
Chaudhary, Dals
advanced treatment at Pepsi 3[3],14
Chaudhary, Riaz
chemical addition analysis 3[2],66
Chien, Travis
UNOX aerobic digester stress analysis 3[11],69
Chin, Rena
high-rate clarification 3[12],26
Christianson, Ivan
personal and process computer system 3[2],20
Cochrane, John
computerized industrial pretreatment 3[11],44
Cohen, Ronald
modeling acid mine drainage impacts 3[6],55
Coker, Craig
sludge dewatering for incineration 3[3],63
Collins, Steven
nutrient-removal upgrade (WSSC) 3[11],6
Columbo, Jim
dewatering for sludge incineration 3[2],9
Compeau, Geoff
remediation of PAHs in groundwater 3[10],83
Conrad, Laura
Rep. H. Nowak profile 3[1],30
solar technology 3[11],24
Coralline, Kart
Alaska plant water supply project 3[1],13
Cosentino, Michael
Galveston Bay monitoring 3[10],42
Crook, James
dual-water system in St. Pete, Fla. 3[8],13
Crosse, John
chemical addition analysis 3[2],66
Crosse, John
L.A. Hyperion plant process 3[11],39
Crumpler, Eugene
sludge incinerator emissions analysis 3[10],73
Cunningham, Alfred
portable surcharge flowmeter 3[2],47
Cunningham, David
computerized industrial pretreatment 3[11],44

D

Daniels, Jeffrey
biodegradation of high explosives 3[3],34
Darida, Charles
UNOX aerobic digester stress analysis 3[11],69
Davey, Tom
water quality status, Canada 3[9],59
Davis, Stuart
naval base industrial facility 3[12],26
Decker, Thomas
Black & Veatch model community 3[3],28
Deeny, Kevin
autoheated-thermophilic
aerobic digestion 3[10],65
Deugwillo, Karl
nutrient-removal upgrade (WSSC) 3[11],6
DiBianca, Susan
pretreatment in Arizona 3[12],23
Dickinson, Ruth
property assessment of landfill 3[3],30
Dittmann, Richard
personal and process computer systems 3[2],20
Dohoney, Robert
activated biofiltration biocells 3[2],57
Dolan, Roger
message on meeting member needs 3[9],57
Dolan, Roger
message on the federation's goals 3[11],36
Driver, E. Tom
trenchless construction 3[4],6
Dunkers, Karl
CSO flow balancing method 3[5],54
Dyhr-Jensen, Soren
nitrogen removal from sludge reject water 3[5],20

E

Eilbott, Eli
attorney-fees payment decision 3[2],52
Ernst, Mark
water reuse in Texas 3[12],18

F

Fairchild, Thomas
variable-grade sewer experience 3[7],40
Faller, Joel
water reuse turbidity standards 3[1],68
Fedotoff, Roy
trenchless techniques (no-dig) review 3[4],48
Field, Richard
CSO flow balancing method 3[5],54
Fink, Jay
computerized industrial pretreatment 3[11],44
Ford, Libby
legislative/regulatory
comment development 3[12],52
Forndran, Angelika
CSO flow balancing method 3[5],54
Forrest, Carol
stormwater discharge permit regulations 3[3],51
Frankowski, Sophie
CSO legislation issues 3[2],44
Frutchey, Robert
trenchless techniques review 3[4],48

G

Ganley, Robert
CSO abatement, Burlington, Vt. 3[2],36
Gaston, John
user-friendly regulation 3[4],67
Gates, Richard
G.E. industrial pretreatment program 3[11],52
Gates, Stephen
G.E. industrial pretreatment program 3[11],52
Gilbert, Steven
nitrogen removal alternatives 3[6],14
Girma, Elsabeth
new sludge pump for high solids 3[7],33
Glover, Jeffrey
deep-soil mixing shoring system 3[11],60
Goff, Robert
property assessment of landfill 3[3],30
Golden, Jonathan
wastewater treatment, Alexandria, Egypt 3[8],28
Goldman, Michael
variable-grade sewer experience 3[7],40
Goralski, Mary
EPA Office of Envir. Education 3[8],34
cryogenic hazardous-waste control 3[3],8
pig-farm litter control 3[2],18
school recycling manual 3[4],16
Superfund surety bonding 3[1],21
Gorder, Paul

infrastructure planning in N. Mex. 3[7],16
synthetic media performance 3[9],13
Grant, Frank
L.A. collection system modeling 3[12],9
L.A. long-range management plan 3[10],36
Gray, Donald
vacuum sewer prospects 3[7],47
Greig, Jeffrey
stormwater utility management financing 3[3],13
Gorman, John
modeling acid mine drainage impacts 3[6],55
Griffin, Mitchell
NPS research needs 3[6],60
Gruninger, Robert
Cr-contaminated groundwater remediation 3[4],53

H

Hagadorn, Robert
advanced treatment at Pepsico 3[3],14
Hagarty
Cr-contaminated groundwater remediation 3[4],53
Hahn, Herman
autoheated-thermophilic aerobic digestion 3[10],65
Hale, James
expert systems process control 3[5],9
Hall, Ray
design for mixed wastewater 3[11],12
Hall, John
clarifying heavy-metals standards 3[9],40
nutrient controls in Tar-Pamlico Basin 3[9],28
Hamann, Carl
potable water reuse issues and processes 3[1],75
Hammer, Donald
aquatic plants treatment analysis 3[3],36
Hancock, Sean
wastewater treatment using duckweed 3[3],41
Harrison, David
centrifuges vs. dissolved air floatation 3[2],60
Heaney, James
watershed drainage control 3[9],63
Heflinger, R. Scott
activated biofiltration biocells 3[2],57
Heidkamp, Ann
employee training model 3[4],16
Heidman, James
autoheated-thermophilic aerobic digestion 3[10],65
Heyl, Michael
water reuse in Fla. 3[11],18
Hocking, Martin
paper vs. polystyrene commentary 3[6],28
Holland, J. Kent Jr.
contractor claims review 3[4],58
Holley, Ronald
soil remediation technologies 3[8],22
Holliday, Daniel
sludge kiln-dust project 3[8],9
Horenstein, Bennett
L.A. Hyperion plant process 3[11],39
Horii, Robert
L.A. collection system modeling 3[12],9
L.A. management planning 3[10],36
Hosaka, Yukihisa
fluidized-bed nitrogen removal, Japan 3[8],48
Houlding, S.W.
3-D geological modeling 3[12],13
Hoye, Walter
groundwater treatment feasibility study, S. Calif. 3[8],74
Hunsinger, Charles, Jr
CSO vortex solids separator 3[6],65
Hunt, William
portable surcharge flowmeter 3[2],47
Hunter, Robert
portable surcharge flowmeter 3[2],47

I

Isaac, Gary
pumping station design 3[7],42
Isaac, Russell
POTW improvement assessment 3[6],69

J

Jaccarino, Richard
activate biofiltration biocells 3[2],57
Jellison, Ramon
L.A. collection system modeling 3[12],9
Jenks, John
ACEC/AAEE award-winning plant design 3[4],9
Jensen, Paul
wastewater system in Bhutan 3[7],62
Jones, Garr
pumping station design 3[7],42
Jones, R. Anne
landfill mining 3[6],32
Joye, Donald
enhanced phosphorus removal 3[9],48

K

Kaiser, Charles
message on government affairs 3[1],36
Kaiser, Chuck
message on WPCF plans 3[9],55
Kaneko, Senji
environmental control, Japan 3[5],59
Kavanaugh, Mike
groundwater treatment feasibility study, S. Calif. 3[8],74
Kelly, James
landfill leachate acceptance criteria 3[8],69
King, Robert
polymer addition performance 3[5],8
Kinsella, John
remediation of PAHs in groundwater 3[10],83
Kirby, Kenneth
centrifuges vs. dissolved air floatation 3[2],60
Knezovich, John
biodegradation of high explosives 3[3],34
Kontor, John
SCADA alarm and metering applications 3[10],24
Kosova, Harold
manhole restoration 3[7],32
Krabbe, Ole
wastewater system in Bhutan 3[7],62
Kreutzberger, William
NPS research needs 3[6],60
Krichten, David
phosphorus removal using expert systems 3[10],60
Kules, Jack LeRoy
personnel training approach 3[6],73
Kurtz, Frederick
UNOX aerobic digester stress analysis 3[11],69

L

LaBelle, Ron
polymer addition performance 3[5],8
Lambeth, Jeff
conserving plant energy 3[5],34
Langlois, Kelvin
double containment tank system 3[6],24
LeClair, Joe
groundwater treatment feasibility study, S. Calif. 3[8],74
Lee, G. Fred
landfill mining 3[6],32
Lee, Hansong
centrifuges vs. dissolved air floatation 3[2],60
Leong, Lawrence
VOC emissions and health risks 3[5],47
Leonhard, Dieter
autoheated-thermophilic aerobic digestion 3[10],65
Lewis, Norma
solar groundwater toxics destruction 3[11],24
Lisec, Fritz
safety program in Kansas City 3[9],34
Logan, Charles
computerized gas monitoring 3[5],36
Low, Bruce
indirect disk sludge drying 3[7],28
Ludwig, Wayne, Jr.
operator qualifications/job descriptions 3[8],57
Lukasic, Gene
1991 Schroepfer Award 3[4],34

M

MacArthur, Dwight
CSO abatement, Burlington, Vt. 3[2],36
MacConnell, Gary
centrifuges vs. dissolved air floatation 3[2],60
Mahaffey, William
groundwater, hazardous wastes 3[10],83
Malcolm, Tom
laying ocean diffusers 3[8],11
Marske, Donald
L.A. management planning 3[10],36
Martin, Martha
gravity sludge thickener performance 3[7],57
Martinoli, D.A.
oil from sludge, Canada 3[7],64
Masuta, Takashi
sludge melting process, Japan 3[7],68
McEwen, Brock
potable water reuse issues and processes 3[1],75
Mendenhall, Trille
sludge land-application presentation 3[2],24
Mercer, James
privatization survey 3[7],37
Mierzejewski, Marek
activate biofilter biocells 3[2],57
Minami, Takeshi
fluidized-bed nitrogen removal 3[8],48
Mishra, Prakash
fluidized-bed wastewater treatment 3[8],52
Molloy, J. Brian
attorney-fees payment decision 3[2],52
Mongan, Thomas
priority pollutant criteria critique 3[12],38
Moran, Dennis
CSO flow balancing method 3[5],54
Mount, Donald
water-quality toxics-control approach 3[12],45
Mousavipour, Farhad
centrifuges vs. dissolved air floatation 3[2],60
Mussman, James
stormwater management financing 3[3],13
Myers, S. David
paper mill plant upgrade 3[9],9
Mysliwiec, Stephen
attorney-fees payment decision 3[2],52

N

Nasuno, Sai

fluidized-bed nitrogen removal 3[8],48
Neafsy, Kathryn
Lake Delavan restoration 3[10],16
Nelson, Michael
remediation of PAHs in groundwater 3[10],83
Newman, Ray
diaphragm filter press drying 3[7],9
Nichols, Alan
ASCE infrastructure recommendations 3[9],34
bioregionalism 3[3],57
Black & Veatch/PlanGraphics alliance 3[12],34
Canadian minister profile 3[5],30
Canadian Technology Centre 3[11],30
coastal habitat protection 3[8],36
CWA enforcement, 1991 3[4],26
CWA reauthorization schedule 3[8],20
DOE cleanup plan 3[4],28
ecological risk assessment 3[6],26
EPA water office reorganization 3[6],40
Great Lakes protection fund 3[8],32
hazardous waste liability market 3[2],32
hazardous waste siting in N.C. 3[6],34
HDR training program 3[12],30
industrial stormwater proposal 3[12],37
institutes of environment 3[12],33
Kuwait recovery 3[8],30
Lake Cumberland diversion 3[10],11
lake management 3[3],22
management 3[7],50
management 3[8],63
Middle East water crisis 3[6],43
1990 election results 3[1],17
1991 AAEE awards 3[6],6
N.J. pollution prevention 3[10],18
nonpoint source pollution, policy and government 3[6],50
North West Water's acquires Wallace & Tiernan 3[9],18
ocean fertilization with iron 3[4],22
Peruvian cholera epidemic 3[7],13
policy and government 3[1],43
policy and government 3[2],54
policy and government, pollution prevention 3[10],54
profile of ADS Environmental Services, Inc. 3[12],36
public financing 3[7],36
risk assessment 3[5],67
stormwater permitting 3[10],20
stream sampling and analysis 3[11],21
student water quality education 3[2],28
Superfund third-party suits 3[10],20
Tennessee wetlands politics 3[1],22
treating ice cream wastes 3[8],14
uranium-removing bacteria 3[9],40
U.S.-Soviet agreement 3[9],53
wastewater technology 3[1],27
water quality 3[4],36
wetlands and river restoration 3[10],6
WSTB coastal pollution study 3[1],27
Nissen, Robert
sludge management in San Diego 3[2],13
Nix, Stephan
urban runoff modeling 3[6],47
Norman, Christian
NPS impacts on the Ohio River 3[6],44
Novotny, Vladimir
diffuse NPS pollution review 3[12],60
Nute, W. Edward
Amur River degradation 3[5],24

O

Oakley, Monica
stormwater discharge permit regulations 3[3],51
Ohshima, Yoshio
sludge melting process, Japan 3[7],68
Olem, Harvey
Clean Air Act implications for POTWs 3[5],40
O'Neill, Eileen
industrial waste conference 3[8],24
EPA Office of Innovative Technology 3[12],48
RCRA reauthorization update 3[9],36
Superfund in the 1990s 3[9],38
Ottman, Richard
personal and process computer system 3[2],20
Outwater, Alice
Boston Harbor cleanup 3[3],45
Ozbilgin, Melih
groundwater treatment feasibility study, S. Calif. 3[8],74

P

Padmanabha, Anantha
conservation in Washington, D.C. 3[7],18
Palmer, Lynn
centralized industrial pretreatment, Md. 3[11],58
Parkhurst, Benjamin
water-quality toxics-control approach 3[12],45
Patel, Manu
Cr-contaminated groundwater remediation 3[4],53
Pavlovics, Sven
water quality, Latvia 3[5],18
Peterson, Susan
solar-aquatic lagoon remediation 3[4],11
Pope Ted
drug policy in Orlando 3[5],37
Pope, Ted
hiring practices 3[1],53
Preston, Lisa
ACEC awards 3[10],33
Pullin, Burline
aquatic plants treatment analysis 3[3],36

R

Ray, Charles
EPA wetlands month 3[5],13
Richards, Joyce
stormwater billing 3[7],39
Rink, L.P.
Colorado stream management 3[1],9
Reardon, David
deep-soil mixing shoring method 3[11],60
Reardon, Rod
nitrogen removal alternatives 3[6],14
Reed, Sherwood
land application vs. advanced treatment 3[8],40
Roddan, Al
sludge incinerator emissions analysis 3[10],73
Rushbrook, Edward
facility project management manual 3[9],32
Ryder, Robert
water reuse turbidity standards 3[1],68

S

Sanks, Robert
pumping station design 3[7],42
Schellpfeffer, Jon
AMSA survey 3[9],24
Schemmerling, Bob
fixed film-activated sludge plant 3[9],49
Scheuerman, Robert
stormwater watershed management 3[9],20
Schlegel, Gayle
process control for digester startup 3[9],69
Scholl, James
stormwater utility rate structure 3[1],47
Schultz, Tara
process control for digester startup 3[9],69
Schwoyer, William
VerTech sludge treatment process 3[11],64
Shamat, Nadim
sludge incinerator emissions analysis 3[10],73
Shao, Y.J.
chemical addition analysis 3[2],66
Sharma, Prasanta
pretreating wine wastewater 3[10],46
Shastid, Thomas
new sludge pump for high solids 3[7],33
Shea, Timothy
sludge dewatering for incineration 3[3],63
Shimp, Gary
MWRA egg-shaped digesters 3[1],8
Sidler, William
variable-grade sewer experience 3[7],40
Sims, David
contract debarment 3[4],63
Sizemore, Harry
L.A. long-range management plan 3[10],36
Sizemore, Harry
L.A. Hyperion plant process 3[11],39
Smith, Bradley
L.A. collection system modeling 3[12],9
Smith, Donald
L.A. Hyperion plant process 3[11],39
Smith, James
VOC emissions and health risks 3[5],47
Smith, Larry
water reuse in Texas 3[12],18
Smith, Lawrence P.
blasting for groundwater remediation 3[12],11
chemical-oxidation groundwater treatment 3[11],34
Smith, Robert
contractor claims review 3[4],58
Sokhey, Amarjit
Cr-contaminated groundwater remediation 3[4],53
Somerville, James
Cairo wastewater project 3[1],33
Soroushian, Fred
chemical addition analysis 3[2],66
Spann, Jeffrey T.
remedial technology workshop 3[1],18
Stanfill, William
industrial treatment facility, Alberta, Canada 3[3],17
sludge management in San Diego 3[2],13
Steele, James
synthetic media performance 3[9],13
Sutton, Paul
fluidized-bed wastewater treatment 3[8],52
Suzuki, Akira
multipurpose wastewater systems, Japan 3[10],92
Sweeny, Neal
downstream states standards rule 3[5],51

T

Tansel, Berrin
Boston Harbor cleanup 3[3],45
Teal, John
solar-aquatic lagoon treatment 3[4],11
Thomas, Melanie
MWRA egg-shaped digesters 3[1],8
Thomson, James
trenchless techniques (no-dig) review 3[4],48
Topudurti, Kirankumar

solar groundwater toxics destruction 3[11],24
Tracy, Corwin
steel-pipe stormwater detention 3[3],9
Tracy, K.D.
phosphorus removal using expert systems 3[10],60
Trout, Paul
process control for digester startup 3[9],69
Turpin, Paul
paper mill plant upgrade 3[9],9
Tutela, Domenic
dewatering for sludge incineration 3[2],9
Twiggs, W. Terry
sludge composting 3[6],11

V

Varma, Ashok
water reuse in Texas 3[12],18
Vasconcelos, John
VOC emissions and health risks 3[5],47

W

Walden, Roy
sludge dewatering for incineration 3[3],63
Weaver, Robert
CWA reauthorization issues 3[4],43
West, Maurice
CSO design 3[6],18
Wheatley, Nancy
Boston's CSO plan 3[2],11
Wilcoxon, Nathan
CSO vortex solids separator 3[6],65
Wilson, Kirk
phosphorus removal using expert systems 3[10],60
Windell, J.T.
Colorado stream management 3[1],9
Wong, Chantale
NAPAP approach to consensus building 3[12],42
Wong, Ernie
groundwater treatment
feasibility study, S. Calif. 3[8],74
Wong, Kai
VerTech sludge treatment process 3[11],64
Woodside, Gayle
double containment tank system 3[6],24
WPCF
1990 Morgan Medal award 3[1],39
1991 awards 3[10],50
Wright, John
Manning Equation and sewer flow 3[9],78
Wyche, Richard
sewer plan and profile sheet program 3[9],47

Y

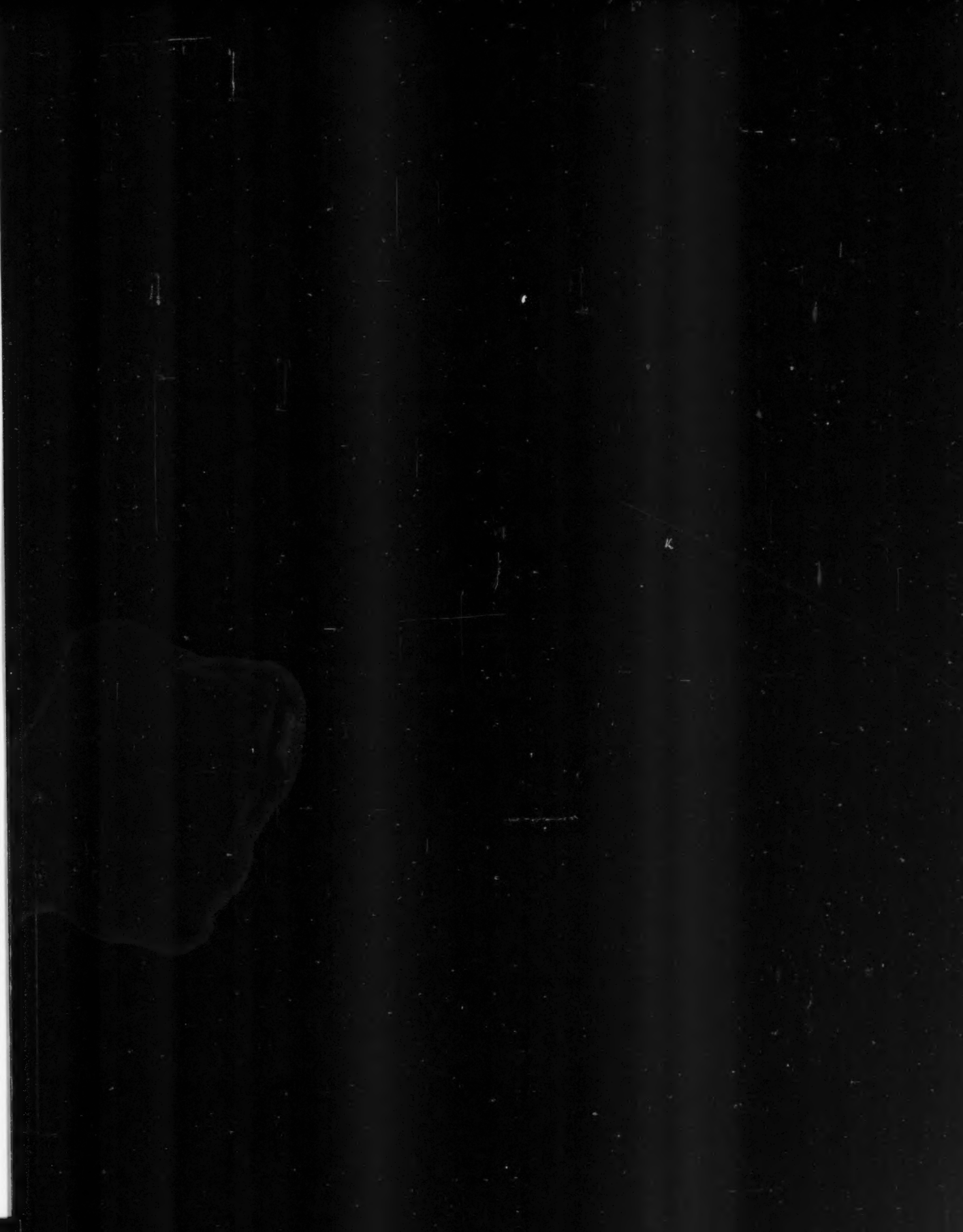
Yamanaka, Keiji
air pollution control, Japan 3[5],59
Yuki, Yosuke
multi-story treatment plant design, Japan 3[7],72

Z

Zila, R.L.
Tulsa bird protection plan 3[12],32
Zolten, Nina
landfill leachate treatment 3[5],63
Zwirn, Bernard
marketing in S.E. Asia 3[12],35
water line construction 3[4],14
Zwiefelhofer, Hans, sludge stabilization 3[1],56

SUBJECT INDEX, 1990-1991

Acid rain
NAPAP-approach to consensus building 3 [12], 42
Air pollution and toxics
Clean Air Act implications for POTWs 3 [5], 40
Control measures in Japan 3 [5], 59
furnace air pollution control 3 [6],9
incinerator emissions analysis method 3 [10], 73
iron addition to oceans to sink CO_2 3 [4],22
VOC emissions and health risks 3 [5], 47
Business and finance
assessment records used for stormwater rates 3 [7],39
Black & Veatch/Plan Graphi. finance 3 [12],34
Great Lakes Protection Fund 3 [8],32
marketing in S.E. Asia 3 [12],35
municipal agency financial survey 3[9],24
North West Water/Wallace & Tiernan 3 [9],18
power cogeneration rate of return 3 [8],6
privatization in England 3 [10], 94
privatization practices survey 3 [7],37
profile of ADS Environmental Services 3 [12],36
public financial market 3 [7],36
stormwater utility management 3 [3],13
stormwater utility rate structure 3 [1], 47
Clean Water Act
downstream state standards ruling 3 [5], 51
hearings schedule 3 [8],18
1990 violation record 3 [4],22
reauthorization bill 3 [8],18
reauthorization issues 3 [4], 43
WPCF's position paper 3 [9],44
Coastal and marine pollution
design guides for Southern Calif. 3 [7],22
interactive computer modeling 3 [6],9
national symposium review 3 [8],36
WSTB wastewater management study 3 [1],27
Collection systems
computers plan N.Mex.'s needs 3 [7],16
deep-soil mixing shoring method 3 [11], 60
manhole restoration process 3 [7],32
Manning Equation and flow 3 [9], 78
modeling for L.A. 3 [12],9
portable surcharge flowmeter 3 [2], 47
pumping station design 3 [7], 42
sewer plan and profile sheet program 3 [9],47
steel pipe linings 3 [4],14
stormwater detention 3 [3],9
trenchless techniques review 3 [4], 48
trenchless technology 3 [4],6
vacuum sewers prospects 3 [7], 47
variable grade sewers experience 3 [7],40
Combined sewer overflow
Boston, Mass. plan 3 [2],11
Burlington, Vt. abatement 3 [2], 36
debris and disinfection facility design 3 [6],18
flow balancing method 3 [5], 54
legislation issues 3 [2], 44
San Francisco's wet-weather program 3 [10],26
vortex solids separator 3 [6], 65
Conservation
DOE CO_2 project fund announcement 3 [10],48
power with variable ac 3 [5],34
Washington, D.C.'s water-saving program 3 [7],18
wastewater reduction program 3 [7],18
Construction
contractor claims review 3 [4], 58
laying ocean diffusers 3 [8],11
quality project manual 3 [9],32
shoring by deep-soil mixing 3 [11], 60
steel pipe linings for distribution system 3 [4],14
water tunnel in Boston 3 [11],16
Ecology
adding iron to oceans to sink CO2 3 [4],22
bioregionalism perspective 3 [3], 57
bird protection 3 [12],32
risk assessment methodology meeting 3 [6],26
Education
Black & Veatch's model community 3 [3],28
employee-training management model 3 [4],16
EPA's new office 3 [8],34
HDR's training program 3 [12],30
personnel training approach 3 [6], 73
school recycling guide 3 [4],16
sludge land application presentation 3 [2],24
student water quality program 3 [2],28
Engineering
1991 AAEE awards 3 [6],6
ACEC awards 3 [10],33
ASCE summit conference review 3 [9],34
design guides for large coastal communities 3 [7],22
tunnel system advantages 3 [11],16
Environmental Protection Agency
industrial stormwater permitting 3 [10],18
integrated management GIS system 3 [12], 20
national wetlands month program 3 [5],13
Office of Environ. Education 3 [8],34
Office of Innovative Technology 3[12],48
Office of Water reorganization 3 [6],40
remedial technologies workshop 3 [1],18
Facility
centralized industrial
wastewater pretreatment 3 [11], 58
cogeneration plant economics 3 [8],6
IBM's double containment tank systems 3 [6],24
multipurpose wastewater systems in Japan 3 [10], 92
multi-story design from Japan 3 [7], 72
nutrient removal upgrade design 3 [11],6
paper mill facility upgrade 3 [9],9
project management manual 3 [9],32
reuse distribution system 3 [8],13
rock replacement with synthetic media 3 [9],13
VerTech process 3 [11], 64
wastewater system in Bhutan 3 [7], 62
Groundwater
biodegradation of high explosives 3 [3],34
chemical oxidation
groundwater remediation 3 [11],34
Chromium-contaminated site remediation 3 [4], 53
controlled blasting and oxidation 3 [12],11
cryogenic barriers 3 [3],8
fiber optic groundwater
contaminant sensors 3 [6],30
PAH bioremediation 3 [10], 83
septage lagoon threat and abatement study 3 [4],11
solar energy technology 3 [11],24
3-D modeling program 3 [12],13

treatment feasibility study for S. Calif. 3 [8], 74
UV/oxidation technologies 3 [11],24
WSTB remediation study plans 3 [5],16
Hazardous wastes
biodegradation of explosives-contamination 3 [3],34
chemical oxidation
groundwater remediation 3 [11],34
Chromium-contaminated site remediation 3 [4], 53
cryogenic barrier control 3 [3],8
DOE nuclear weapons waste cleanup 3 [4],28
double containment tank systems 3 [6],24
landfill leachate acceptance criteria 3 [8], 69
liability-driven engineering market 3 [2],32
naval base industrial facility 3 [12],26
PAH bioremediation 3 [10], 83
prioritizing remediation with GIS 3 [12],20
property assessment of landfill 3 [3],30
Purdue U.'s industrial waste conference 3 [8],24
RCRA reauthorization update 3 [9],36
remedial technologies workshop 3 [1],18
safe pump transfer system 3 [6],11
soil remediation technologies 3 [8],22
solar energy technology 3 [11],24
suits against municipalities 3 [10],20
Superfund in the 1990s 3 [9],38
Superfund site feasibility study 3 [8], 74
treatment siting prohibitions in N.C. 3 [6],34
uranium-removing bacteria 3 [9],40
UV/oxidation technologies 3 [11],24
Industrial pretreatment and wastes
centralized treatment, Canada 3[3],17
centralized treatment and wastes in U.S. 3 [11], 58
computerized program management 3 [11], 44
General Electric program 3 [11], 52
Purdue Univ.'s industrial
sampling program and regulations 3[12],23
waste conference 3 [8],24
Information systems
assessment records for stormwater billing 3 [7],39
Infrastructure
ASCE recommendations 3 [9],34
International
Canada plant's diaphragm filter press 3 [7],9
Canadian environment minister profile 3 [5],30
Cholera epidemic in Peru 3 [7],13
degradation of Amur River 3 [5],24
earthquake relief for Armenia 3 [10], 90
industrial waste treatment, Canada 3 [3],17
Japan's environmental control measures 3 [5], 59
Japan's sludge melting process 3 [7], 68
Kuwait cleanup program and status 3 [8],30
Latvia water quality program 3 [5],18
Middle East water crisis 3 [6],43
multipurpose wastewater systems in Japan 3 [10], 92
multi-storage facilities in Japan 3 [7], 72
nitrogen removal from sludge reject water 3 [5],20
oil from sludge in Canada 3 [7], 64
privatization in England 3 [10], 94
Soviet environmental impact
statement guides 3 [5],28
U.S.-Soviet freshwater accord 3 [9],53
wastewater Technology Centre 3 [11],30
wastewater treatment, Alexandria, Egypt 3 [8],28
wastewater treatment, Cairo project 3 [1],33
wastewater treatment in Bhutan 3 [7], 62
Legislation
Clean Air Act review 3 [5], 40
Clean Water Act reauthorization bill 3 [8],18
Clean Water Act reauthorization issues 3 [4], 43
Clean Water Act reauthorization schedule 3 [8],20
national symposium recommendations 3 [8],36
RCRA reauthorization update 3 [9],36
Rep. Henry Nowak interview 3 [1],30
Superfund surety bonding 3 [1],20
Tennessee wetlands protection 3 [1],22
Liability
engineering market effects 3 [2],32
Superfund surety bonding 3 [1],20
Management
ASCE's quality project manual 3 [9],32
computerized pretreatment
program management 3 [11], 44
computers plan N.M.'s infrastructure needs 3 [7],16
employee training management model 3 [4],16
hiring practices 3 [1], 53
L.A. long-range plan 3 [10],36
personal and process computer system 3 [2],20
remedial action priority model 3 [12],20
operational quality 3 [1], 50
operator qualifications and job descriptions 3 [8], 57
personnel training approach 3 [6], 73
stormwater utility rate structure 3 [1], 47
wastewater in coastal areas study 3 [1],27
watershed approach to stormwater 3 [9],20
water supply in Eastern U.S. 3 [7], 50
water supply in Western U.S. 3 [8], 63
worker drug program 3 [5],37
Modeling
acid mine drainage impacts 3 [6], 55
collection system program 3 [12],9
infrastructure needs 3 [7],16
prioritizing remediation with GIS 3 [12],20
3-D geological modeling program 3 [12],13
urban runoff models 3 [6], 47
Monitoring
computerized gas monitoring 3 [5],36
Louisville's stream program 3 [11],21
stream sampling program in Louisville 3 [11],24
student water quality program 3 [2],28
water quality in Latvia 3 [5],18
Natural systems
aquatic plants treatment analysis 3 [3], 36
award-winning effluent disposal system 3 [10],33
for treating ice-cream wastes 3 [8],14
lagoons using duckweed 3 [3], 41
septage lagoon treatment study 3 [4],11
Nonpoint source pollution
biological mining waste treatment 3 [9],40
Colorado stream study and control plans 3 [1],9
diffuse pollution review 3 [12], 60
farm runoff-reduction program 3 [1],21
herbicide in rainwater discovery 3 [9],40
impacts on the Ohio River 3 [6], 44
innovative nutrient loading program 3 [9],28
modeling acid mine drainage impacts 3 [6], 55
pig-farm litter control 3 [2],18
research needs 3 [6], 60
urban runoff modelling 3 [6], 47
USDA cleanup program 3 [6], 50
watershed drainage control 3 [9], 63
Nutrient removal
fluidized bed nitrogen removal 3 [8], 48
Operations
furnace air pollution control 3 [6],9
Policy and government
attorney-fees payment decision 3 [2], 52
citizen suits 3 [2], 54
contract debarment 3 [4], 63
construction contract claims 3 [4], 58
Corps of Engineers' environmental policy 3 [1], 43
DOE nuclear weapons waste cleanup 3 [4],28
environmental violations record 3 [4],22
EPA Office of Environ. Education 3 [8],34
EPA Office of Innovative Technology 3 [12], 48
legislative/regulatory
comment development 3 [12], 52
NAPAP procedure 3 [12], 42
national environment institutes advocacy 3 [12],33
N.C. treatment discharge dilution law 3 [6],34
N.J. pollution prevention program 3 [10],18
number of stormwater permit applications 3 [7],39
nutrient-trading in N.C. 3 [9],28
priority pollutant criteria critique 3 [12], 38
USDA nonpoint source pollution policy 3 [6], 50
user-friendly regulation 3 [4], 67
water-quality toxics-control approach 3 [12], 45
Politics
environmental issues in 1990 election 3 [1],17
Pollution prevention
EPA's pollution prevention program 3 [10], 54
GIS software use 3 [12], 20
New Jersey program 3 [10], 18
Pretreatment
sampling program and regulation summary 3 [12],23
Process control
biological-phosphorus-removal
expert systems 3 [10], 60
digester startup 3 [9], 69
expert systems 3 [5],9
personal and process computer system 3 [2],20
Profiles
Canada's Environment Minister de Cortet 3 [5],30
(Rep-D) Henry J. Nowak 3 [1],30
Regulation
petition on heavy-metal criteria 3 [9],40
stormwater discharge permit 3 [3], 51
Risk assessment
ecological methodology review 3 [6],26
leaking underground storage tanks 3 [8],22
paper vs. polystyrene 3 [6],28
Peru's cholera epidemic 3 [7],13
scientists reappraise methods 3 [5], 67
volatile organic compounds 3 [5], 47
Safety and health
computerized gas monitoring 3 [5],36
cost-saving program in Kansas City 3 [9],34
drug policy in Orlando 3 [5],37
Sampling and analysis
computerized gas monitoring 3 [5],36

fiber optic groundwater contaminant sensors 3 [6],30
Louisville's stream program 3 [11],21
monitoring program in Latvia 3 [5],18
pretreatment program in Tempe, Ariz. 3 [12],23
Sludge management and treatment
autoheated-thermophilic aerobic digestion 3 [10], 65
award-winning digester gas use facility 3 [10],33
centrifuges vs. dissolved air floatation 3 [2], 60
composting and drying in San Diego, Calif. 3 [2],13
dewatering for incineration 3 [2],9
dewatering for incineration 3 [3], 63
diaphragm filter press drying 3 [7],9
gravity sludge thickener performance 3 [7], 57
incinerator hydrocarbon emissions analysis method 3 [10], 73
indirect disk drying 3 [7],28
kiln-dust process project 3 [8],9
land application presentation 3 [2],24
MWRA egg-shaped digesters 3 [1],8
new sludge pump for high solids 3 [7],33
nitrogen removal from reject water 3 [5],20
oil from sludge in Canada 3 [7], 64
regional composting plant 3 [6],11
sludge melting in Japan 3 [7], 68
sludge stabilization 3 [1], 56
UNOX aerobic digester stress analysis 3 [11], 69
VerTech process description and performance 3 [11], 64
Solid waste management
landfill mining 3 [6],32
leachate treatment 3 [5], 63
Stormwater
assessment records for rate fixing 3 [7],39
award-winning storage facility 3 [10],34
best management practices 3 [10],26
control measures 3 [9],22
discharge permit regulations review 3 [3], 51
industrial facility permitting 3 [10],20
industrial permit hearings 3 [12],37
industrial discharge group applications 3 [7],39
steel-pipe detention 3 [3],9
utility financing 3 [3],13
utility rate structure 3 [1], 47
watershed drainage control in Fla. 3 [9], 63
watershed management strategy 3 [9],20
Waupun, Wis. award-winning system 3 [4],34
Technology
autoheated-thermophilic aerobic digestion 3 [10], 65
biological-phosphorus-removal expert systems 3 [10], 60
contaminated groundwater site remediation 3 [8], 74
biotechnology conference 3 [8],24
Canada's wastewater Technology Centre 3 [11],30
chemical-oxidation groundwater treatment 3 [11],34
computer modeling of coastal pollution 3 [6],9
design program for plan profile sheets 3 [9],47
ecosystem data management system 3 [10],42
design program for plan profile sheets 3 [9],47
ecosystem data management system 3 [10],42
energy saving with variable ac 3 [5],34
EPA's Kovalick on innovation 3 [12], 48
fiber optic groundwater contaminant sensors 3 [6],30
fixed film and activated sludge system 3 [9],49
floating-aerator oxidation channel 3 [4],9
fluidized-bed nitrogen removal in Japan 3 [8], 48
fluidized-bed treatment 3 [8], 52
furnace air pollution control 3 [6],9
GAC contactor system for water treatment 3 [6],6
gravity sludge thickeners 3 [7], 57
groundwater cryogenic barriers 3 [3],8
high-explosives biodegradation 3 [3],34
high-rate clarification process 3 [12],26
new sludge pump for high solids 3 [7],33
organic-contaminated soil remediation 3 [8],22
paper versus polystyrene 3 [6],28
personal and process computer system 3 [2],20
portable flow measurement 3 [2], 47
prioritizing remediation with GIS 3 [12],20
remedial technologies workshop 3 [1],18
remote telemetry SCADA advances 3 [10],24
safe pump transfer system 3 [6],11
SCADA alarm and metering program 3 [9],46
solar aquatic lagoon treatment 3[4],11
solar energy destruction 3 [11],24
stack-gas hydrocarbon analyzer analysis 3 [10], 73
supercritical water oxidation 3 [1],27
3-D geological modeling program 3 [12],13
UV/oxidation toxics destruction 3 [11],24
UNOX activated sludge system performance 3 [11], 69
vacuum sewers prospects 3 [7], 47
variable grade sewers experience 3 [7], 40
VerTech sludge treatment process 3 [11], 64
vortex solids separator 3 [6], 65
Toxics
heavy-metal criteria petition 3 [9],40
stormwater best management practices 3 [10],26
supercritical water oxidation 3 [1],27
uranium-removing bacteria 3 [9],40
water-quality based controls 3 [12], 45
Training, operator qualifications and job descriptions 3 [8], 57
Wastewater treatment and disposal
ACEC/AAEE award-winning design 3 [4],9
activated biofiltration biocells 3 [2], 57
advanced treatment at PepsiCo 3 [3],14
aquatic plants treatment analysis 3 [3], 36
biological-phosphorus-removal process control 3 [10], 60
Cairo project 3 [1],33
challenge in Alexandria, Egypt 3 [8],28
chemical addition analysis 3 [2], 66
design for mixed wastewater 3 [11],12
fixed-film and activated sludge 3 [9],49
fluidized-bed nitrogen removal 3 [8], 48
fluidized-bed treatment 3 [8], 52
ice cream wastes 3 [8],14
industrial treatment plant, Alberta, Can. 3 [3],17
industrial treatment plant, Md. 3[11],58
industrial wastewater containment 3 [6],24
Japan's environmental control measures 3 [5], 59
lagoon aquatic system 3[4],11
lagoons using duckweed 3 [3], 41
land versus advanced treatment 3 [8], 40
laying ocean diffusers 3 [8],11
leachate process 3 [5], 63
L. A. Hyperion plant process 3 [11], 39
naval base industrial facility 3 [12],26
nitrogen removal alternatives 3 [6],14
nutrient removal upgrade design 3 [11],6
paper mill facility upgrade 3 [9],9
phosphorus removal with $AlCl_3$ 3 [9],48
polymer addition performance 3 [5],8
solar aquatic lagoon treatment 3[4],11
sulfation/oxidation in wastewater degradation 3 [12], 55
synthetic media performance 3 [9],13
trickling filter ponding 3 [1], 39
UNOX activated-sludge system stress analysis 3 [11], 69
wine and vinegar wastes 3 [10],46
Water Quality
approach to toxics control 3 [12], 45
assessment of POTW improvements 3 [6], 69
Boston Harbor 3 [3], 45
Colorado stream study and control plans 3 [1],9
degradation of Amur River Ekuk, Alaska, water supply project 3 [1],13
farm runoff-reduction program 3 [1],21
Great Lakes Protection Fund 3 [8],32
improvements with wetlands 3 [10],6
Lake Cumberland outfall dispute 3 [10],11
lake management symposium and guide manual 3 [3],22
marine waters 3 [4], 36
restoring Delavan Lake 3 [10],16
status in Canada 3 [9], 59
stream sampling in Louisville, Ky. 3 [11],21
student water quality program 3 [2],28
urban runoff effects on the Ohio River 3 [6], 44
U.S.-Soviet freshwater research exchange 3 [9],53
WSTB groundwater study plans 3 [5],16
Water Reuse
dual distribution system 3 [8],13
irrigation program performance 3 [12],18
land vs. advanced treatment 3 [8], 40
Manatee County Fla. 3 [11],18
potable reuse issues and processes 3 [1], 75
reclamation facility in Puerto Rico 3 [6],6
turbidity standards 3 [1], 68
Wetlands
habitat restoration 3 [10],6
national symposium on habitat conservation 3 [8],36
rights legislation in Tenn. 3 [1],22
wetlands month 3 [5],13
WPCF
1990 Morgan Medal Award 3 [1], 39
1991 Annual-Conference site article 3 [9], 59
1991 awards 3 [10], 50
1991 Outstanding Achievement Award 3 [11], 39
position on CWA reauthorization 3 [9],44
President Dolan on the Federation role 3 [11], 36
President-elect Dolan on meeting member needs 3 [9], 57
President Kaiser on government affairs 3 [1], 36
President Kaiser on WPCF plans 3 [9], 55
Schroepfer Award, 1990 3 [4],34
Water Quality 2000 meeting 3 [8],27
WE&T circulation statement 3 [1],28